

REMARKS

Claims 1-10 are pending in this application. In the Office Action, the Examiner rejected the pending claims as follows. Claims 1-6 were rejected under 35 U.S.C. §103(a) as being unpatentable over the Gustafsson reference from Applicant's Information Disclosure Statement (hereinafter Gustafsson) in view of U.S. Patent No. 6,711,147 B1 (Barnes). Claims 7-10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gustafsson in view of U.S. Patent No. 6,904,025 B1 (Madour) and U.S. Patent No. 6,735,187 B1 (Helander).

Gustafsson teaches a regional tunnel management method.

Barnes discloses receiving a first mobile internet protocol registration request by an agent of the mobile internet protocol network serving the mobile node; and sending a second mobile internet protocol registration request to a serving node in the cellular telephone network, requesting that the serving node serve as a proxy.

Helander teaches a physical link from a serving general packet radio service support node (SGSN) and a gateway GSN (GGSN) in a GPRS backbone and a GTP (GPRS tunneling protocol).

Regarding the Examiner's rejection of independent Claim 1, the Examiner states that Gustafsson teaches all the elements of Claim 1 except for Gateway GPRS Support Nodes (GGSNs) performing the functions of foreign agents (FAs) and the gateway foreign agents (GFAs), which the Examiner states is taught by Barnes. Upon reviewing

the cited references, it is respectfully submitted that the Examiner is incorrect.

The claims of the present invention are drawn to a method of performing a registration when a mobile node (MN) moves to a region of a first GGSN/FA (i.e., a first FA) from a region of another GGSN/FA (i.e., a second FA) with which the MN is presently registered, while using the same GFA. In other words, the claims of the present invention are drawn to a method for performing a registration caused by a change in an FA (as opposed to a GFA) using the same GFA. For the purposes of discussion only, this registration will be called a “re-registration” as opposed to the initial registration in which a GFA is registered in a home agent (HA). During the re-registration, the second FA performs a function of a GGSN/GFA for the first FA. In other words, the claims of the present invention are drawn to performing a re-registration within a region covered by the same GFA. This is more clearly illustrated with reference to FIG. 7 of the present. Furthermore, the claims of the present are directed to a system and a method which uses GGSNs to perform numerous functions, such as a GGSN function, an FA function, and a GFA function.

The Examiner states that Gustafsson teaches transmitting a location registration request upon receiving an Agent Advertisement message including information indicating that the first GGSN supports a foreign agent function. It is respectfully submitted that the Examiner is incorrect. Although Gustafsson teaches an FA transmits an Agent Advertisement message, these Agent Advertisement messages are transmitted by FAs which only perform FA functions. Accordingly, there would be no need or motivation for

Gustafsson to teach or suggest transmitting an Agent Advertisement message including the additional information recited in the claim, i.e., information indicating that a first GGSN supports an FA function.

The Examiner apparently equates the first GGSN as recited in the claims with the first FA (FA1) as taught by Gustafsson, and equates the second GGSN as recited in the claims with the second FA (FA2) as taught by Gustafsson (e.g., see Office Action, Page 2; and Gustafsson section 3.3, and FIGs. 2, 3, and 7 (illustrating the FA1, FA2, and the relationship between the FA1 and FA2, respectively)).

Gustafsson teaches when a mobile node (MN) first arrives at a visited domain, the (MN) performs a location registration (i.e., an initial registration) in the home agent (HA) and changes a GFA. This is illustrated with reference to FIG. 2 of Gustafsson, which clearly illustrates a registration at the GFA and the home agent. After the initial registration in the visited domain, Gustafsson discloses since the care-of address (COA) address registered at the HA is the GFA address, it will not change when the mobile node changes a foreign agent under the same GFA (i.e., during a re-registration). In other words, when the MN changes FAs in the visited domain under the GFA, the COA registered in the HA does not change. FIG. 2 of Gustafsson illustrates the re-registration procedure within a visited domain (i.e., the change from FA1 to FA2 as shown in FIGs. 1 and 2, respectively). Gustafsson further teaches the HA uses the same COA even though the local COA has changed as a result of the registration. Accordingly, Gustafsson does not teach or suggest changing the address of a FA in a registered in a HA during a re-

registration procedure which does not change the GFA.

In contrast to that which is taught by Gustafsson, the claims of the present invention are drawn to a method of changing a COA registered in the HA during a re-registration procedure. This is more clearly illustrated with reference to FIGs. 6 and 7 of the present application, which illustrate a MN changing an FA within a registered domain by transmitting a location registration request from the mobile node to the first GGSN, upon receiving an Agent Advertisement message with an address of the second GGSN and information indicating that the first GGSN supports a foreign agent function, said Agent Advertisement message being transmitted by the first GGSN, which is neither taught nor suggested by Gustafsson or Madour or the combination thereof. Moreover, Claim 1 includes the recitation of registering by the second GGSN an address of the first GGSN to which the mobile node belongs, and then transmitting to the home agent a Location Information message indicating the address of the first GGSN to which the mobile node belongs, which is neither taught nor suggested by Gustafsson or Madour or the combination thereof. Accordingly, for at least the above-stated reasons, it is respectfully requested that the rejection under 35 U.S.C. §103(a) of Claim 1 be withdrawn.

Regarding, the Examiner's rejection of independent Claim 7, the Examiner states that the combination of Gustafsson, Madour, and Helander teach each and every limitation of Claim 7. It is respectfully submitted that the Examiner is incorrect for at least the same reasons as stated above with regard to the rejection of Claim 1. As

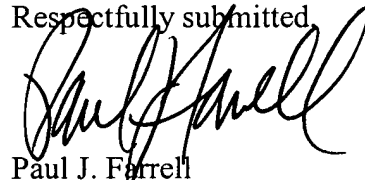
Helander does not cure the above-noted deficiencies of Gustafsson and Madour.

Accordingly, it is respectfully requested that the rejection under 35 U.S.C. §103(a) of Claim 7 be withdrawn.

In light of the discussion above, it is respectfully submitted that independent Claims 1 and 7 overcome the stated rejections and are in condition for allowance. Without conceding the patentability per se of dependent Claims 2-6 and 8-10, it is respectfully submitted that these claims are also in condition for allowance by virtue of their dependence on Claims 1 and 7, respectively.

Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicant's attorney at the number given below.

Respectfully submitted,



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